



## **NC6136 Gigabit Server Adapter**

User Guide

Third Edition (June 2007)  
Part Number 212419-00C  
Compaq Computer Corporation

## Notice

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# About This Guide

This user guide can be used for reference when installing the Compaq NC6136 Gigabit Server Adapter.



**WARNING:** To reduce the risk of personal injury from electrical shock and hazardous energy levels, only authorized service technicians should attempt to repair this equipment. Improper repairs could create conditions that are hazardous.

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**IMPORTANT:** The installation of options and servicing of this product shall be performed by individuals who are knowledgeable of the procedures, precautions, and hazards associated with equipment containing hazardous energy circuits.

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## Symbols in Text

These symbols may be found in the text of this guide. They have the following meanings.



**WARNING:** Text set off in this manner indicates that failure to follow directions in the warning could result in bodily harm or loss of life.

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**CAUTION:** Text set off in this manner indicates that failure to follow directions could result in damage to equipment or loss of information.

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**IMPORTANT:** Text set off in this manner presents clarifying information or specific instructions.

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**NOTE:** Text set off in this manner presents commentary, sidelights, or interesting points of information.

## Compaq Technician Notes



**WARNING:** Only authorized technicians trained by Compaq should attempt to repair this equipment. All troubleshooting and repair procedures are detailed to allow only subassembly/module level repair. Because of the complexity of the individual boards and subassemblies, no one should attempt to make repairs at the component level or to make modifications to any printed wiring board. Improper repairs can create a safety hazard. Any indications of component replacement or printed wiring board modifications may void any warranty.

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**WARNING:** To reduce the risk of personal injury from electrical shock and hazardous energy levels, do not exceed the level of repair specified in these procedures. Because of the complexity of the individual boards and subassemblies, do not attempt to make repairs at the component level or to make modifications to any printed wiring board. Improper repairs could create conditions that are hazardous.

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**WARNING:** To reduce the risk of electric shock or damage to the equipment:

- If the system has multiple power supplies, disconnect power from the system by unplugging all power cords from the power supplies.
  - Do not disable the power cord grounding plug. The grounding plug is an important safety feature.
  - Plug the power cord into a grounded (earthed) electrical outlet that is easily accessible at all times.
- 



**CAUTION:** To properly ventilate your system, you must provide at least 12 inches (30.5 cm) of clearance at the front and back of the computer.

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**CAUTION:** The computer is designed to be electrically grounded. To ensure proper operation, plug the AC power cord into a properly grounded AC outlet only.

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## Where to Go for Additional Help

HP updates networking software frequently to include new functionality and features. Complete the following steps to get the latest drivers, firmware, and documentation.

1. Go to the HP website (<http://www.hp.com>).
2. Click **Support and Troubleshooting Information** from the left menu bar.
3. Type the product name in the **for product** box and press **Enter**. For example, type NC370T.
4. Download the drivers, firmware, or documentation as needed.

## Compaq Customer Support

You can reach Compaq automated support services 24 hours a day, every day at no charge. The services provide the most up-to-date information about Compaq products. You can access installation instructions, troubleshooting information, and general product information from the Compaq website.

For comprehensive online support, refer to:

[www.compaq.com](http://www.compaq.com)

For international information, refer to:

[www.compaq.com/corporate/overview/world\\_offices.html](http://www.compaq.com/corporate/overview/world_offices.html)

## Compaq Website

For Compaq Web-based support services, visit

<http://www.compaq.com/support>

Navigate to a specific product and then look for support information from this list of support resources.

For a complete list of available SoftPak files, navigate to:

<http://www.compaq.com/support/files/allsp.html>

Send email to:

[support@compaq.com](mailto:support@compaq.com)

## PaqFax Number

The Compaq fax-on-demand retrieval system provides product-specific information. To use the fax system, you must be in North America and you must have a fax machine or fax modem to receive the automated fax transmittals. Call 1-800-345-1518, option 1, and request a product catalog. After you receive the catalog, you can order the documents through the Compaq fax-on-demand retrieval system.

## Calling the Compaq Support Line

When you call the Compaq Support line, you must be at your server with your software running and the product documentation at hand. The Compaq technician may ask for the following information:

- Your address and telephone number
- The name and model number of the Compaq product you are calling about
- The serial number of your Compaq product
- The names and version numbers of the software you are using to operate the Compaq product
- The name and version number of the operating system you are using
- The system type (manufacturer and model number)
- The expansion boards or add-in cards in your server
- The amount of memory in your server

## **North America**

The Compaq Customer Support department for North America can be reached at 1-800-652-6672 (1-800-OKCOMPAQ). For continuous quality improvement, calls may be monitored or recorded.

## **Europe, the Middle East, and Africa**

In Europe, the Middle East, and Africa, contact your local Compaq authorized service provider. Details of your local Compaq authorized service provider can be obtained from your Compaq authorized reseller, dealer, or from the Compaq website at

<http://www.compaq.com>

## **Worldwide Access**

Compaq has technical support centers worldwide. Many of the centers are staffed by technicians who speak the local languages. For a list of Compaq support centers, go to:

<http://www.compaq.com>

From the Compaq Worldwide home page, select your country and click Go to find the nearest Compaq office.



# Chapter 1

## Introduction

### Overview

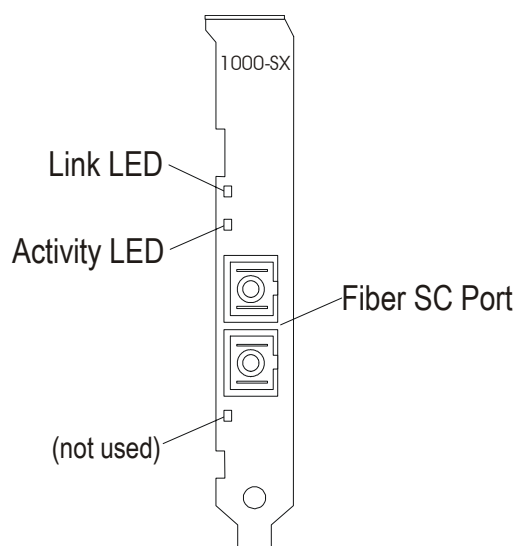
The Compaq NC6136 Gigabit Server Adapter is a stand-alone, single port, 64-bit/66MHz PCI Gigabit (1000BASE-SX) Ethernet adapter. It uses fiber-optic cable that provides failover capabilities with other Gigabit and 10/100 adapters installed in a server. The NC6136 Gigabit Server Adapter is a supported option for selected Compaq *ProLiant*™ servers.

For the latest functionality, features, and operating system support for this server adapter, see the networking page at

<http://h18004.www1.hp.com/products/servers/networking/index-nic.html>

### Hardware Overview

The Compaq NC6136 Gigabit Server Adapter features delay and reduction of transmit interrupts; EEPROM interface, including loadable configuration space fields; and elimination of receive buffer alignment requirements. The adapter supports emerging standards for system manageability and power management, such as ACPI. The NC6136 Server Adapter has a single, fiber SC port and LED indicators for link and activity.



## NC6136 Server Adapter

Figure 1-1. Fiber SC Port and LED locations

## LED Indicators

The NC6136 Gigabit Server Adapter has two diagnostic LED indicators for the fiber SC port.

**Table 1-1**  
**LED Operations for the NC6136 Adapter**

LED Name	Display	Description
LNK	On	The adapter is receiving power; the cable connection is good.
	Off	The adapter is not receiving power or the cable connection is faulty.
ACT	Blinking	The adapter is sending or receiving network data.
	Off	The adapter is not sending or receiving network data.

## Chapter 2

# Installing the Adapter

This chapter describes installation precautions, how to install the adapter, and how to attach the fiber network cable.



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**WARNING:** To avoid the risk of personal injury or damage to the equipment, consult the Safety information and user documentation provided with your equipment before attempting the installation.

Many servers are capable of producing energy levels that are considered hazardous. Users should not remove enclosures nor should they bypass the interlocks provided for removal of these hazardous conditions.

Installation of this adapter should be performed by individuals who are both qualified in the servicing of computer equipment and trained in the hazards associated with products capable of producing hazardous energy levels.

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**NOTE:** Before removing the cover of your server, refer to the Compaq documentation for the proper methods for installing a PCI card and avoiding electric shock hazards.

## Electrostatic Discharge Precautions

A discharge of static electricity from a finger or other conductor can damage components on the adapter. This can make the adapter inoperable. In addition to the following information, see Appendix B for more precautions.

To prevent electrostatic damage, observe the following precautions:

- Always properly ground yourself when touching a static-sensitive component or assembly.
- Avoid hand contact by transporting and storing parts in static-safe containers.
- Keep electrostatic-sensitive parts in their containers until they arrive at static-free locations.
- Place parts on a grounded surface before removing them from their containers.
- Avoid touching pins, leads, or circuitry.

## Installing the Adapter in a Server

Refer to the Compaq ProLiant documentation for the specific steps necessary to safely install a PCI card in your server.

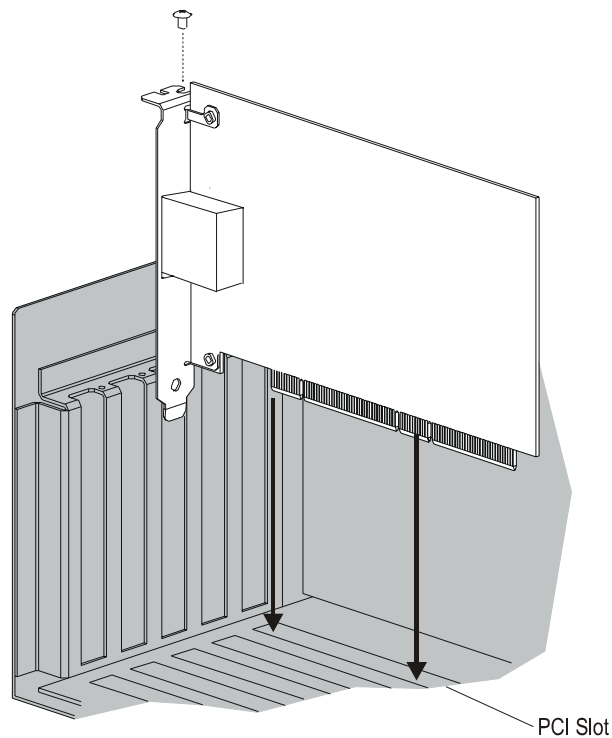


Figure 2-1. Installing the adapter in a server

1. If the server is not PCI Hot Plug compliant, power down the server and unplug the power cord.
2. Remove both the server cover and the cover bracket from a PCI slot.



**WARNING:** To reduce the risk of personal injury from hot surfaces, allow the internal system components to cool before touching them.



**CAUTION:** If the device is not PCI Hot Plug compliant, power down the device and unplug the power cord from the power outlet before removing the device cover. Failure to do so may damage the adapter or computer.

3. Firmly seat the adapter in a PCI slot and secure the adapter bracket.
4. Replace the server cover and plug in the power cord.

## Connecting the Fiber Network Cable

The NC6136 Server Adapter has one SC fiber port. This port supports 1000BASE-SX multimode fiber cable with a maximum cable length dependent upon the fiber type, mode, and cable size. See Appendix C for maximum cable lengths.

To insert the network SC connector into the adapter port, line up the slot on the fiber connector with the adapter and gently push until the retainers click into place. Figure 2-2 shows the installation of an SC fiber connector in an SC fiber port.

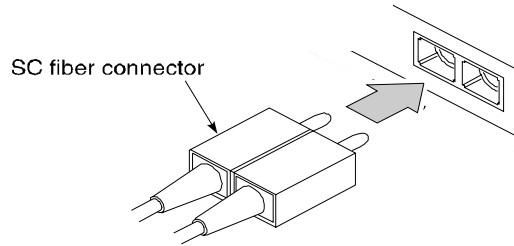


Figure 2-2. Installing an SC connector in an SC fiber port

## **Regulatory Compliance Notices**

### **European Union Notice**

Products with the C0E Marking comply with both the EMC Directive (89/336/EEC) and the Low Voltage Directive (73/23/EEC) issued by the Commission of the European Community.

Compliance with these directives implies conformity to the following European Norms (in brackets are the equivalent international standards):

- EN55022 (CISPR 22) – Electromagnetic Interference
- EN55024 (IEC61000-4-2,3,4,5,6,8,11) – Electromagnetic Immunity
- EN61000-3-2 (IEC61000-3-2) – Power Line Harmonics
- EN61000-3-3 (IEC61000-3-3) – Power Line Flicker
- EN60950 (IEC950) – Product Safety

## Electrostatic Discharge

To prevent damage to the system, be aware of the precautions you need to follow when setting up the system or handling parts. A discharge of static electricity from a finger or other conductor may damage system boards or other static-sensitive devices. This type of damage may reduce the life expectancy of the device.

To prevent electrostatic damage, observe the following precautions:

- Avoid hand contact by transporting and storing products in static-safe containers.
- Keep electrostatic-sensitive parts in their containers until they arrive at static-free workstations.
- Place parts on a grounded surface before removing them from their containers.
- Avoid touching pins, leads, or circuitry.
- Always be properly grounded when touching a static-sensitive component or assembly.

### Grounding Methods

There are several methods for grounding. Use one or more of the following methods when handling or installing electrostatic-sensitive parts:

- Use a wrist strap connected by a ground cord to a grounded workstation or computer chassis. Wrist straps are flexible straps with a minimum of 1 megohm  $\pm 10$  percent resistance in the ground cords. To provide proper ground, wear the strap snug against the skin.
- Use heel straps, toe straps, or boot straps at standing workstations. Wear the straps on both feet when standing on conductive floors or dissipating floor mats.
- Use conductive field service tools.
- Use a portable field service kit with a folding static-dissipating work mat.

If you do not have any of the suggested equipment for proper grounding, have a Compaq authorized reseller install the part.

**NOTE:** For more information on static electricity or assistance with product installation, contact your Compaq authorized reseller.

## Specifications

### NC6136 Gigabit Server Adapter Specifications

**Table C-1**  
**NC6136 Gigabit Adapter Specifications**

Specification	Description
Network Controller Chipset	Intel 82543GC MAC
Data Transfer Method	64-bit/66MHz PCI, compatible with 64-bit/33MHz or 32-bit/33MHz Bus Master DMA
Standards Supported	IEEE 802.3z, 802.3ad (static configuration mode only), 802.1p, 802.1Q
Dimensions	7.0 x 4.8 inches (L x W), 17.8 cm x 12.2 cm (including bracket)
Connector and Distances	See Table C-2
Interrupts Supported	Automatically configured
Temperature Range	Operating: 0° C to 55° C / 32° F to 131° F Storage: -65° C to 85° C / -85° F to 185° F
Relative Humidity	Operating: 10% to 90% Storage: 5% to 95%
Agency Approvals	<div> <div> <ul style="list-style-type: none"> <li>■ FCC Class B</li> <li>■ VCCI Class B</li> <li>■ BSMI Class A</li> <li>■ CISPR 22 Class B</li> <li>■ EN60950</li> </ul> </div> <div> <ul style="list-style-type: none"> <li>■ EN 55022 Class B</li> <li>■ EN55024</li> <li>■ UL</li> <li>■ Canada UL</li> <li>■ ICES-003 Class B</li> </ul> </div> </div>
Power Requirement	1620 mA @ 5V max
Data Transmission Rate	1000 Mb/s (Full-duplex)



## Fiber Cable Specifications

To connect to the network, the NC6136 uses 1000BASE-SX fiber cable.

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**Table C-2**  
**Fiber Cable Maximum Distances for 1000BASE-SX**

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Mode	Size	Max Distance
Multimode	62.5/125 $\mu\text{m}$	220 meters
Multimode	50/125 $\mu\text{m}$	550 meters

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